THE COMMONWEALTH OF MASSACHUSETTS

WATER RESOURCES COMMISSION

100 CAMBRIDGE STREET, BOSTON MA 02114

Meeting Minutes for February 14, 2019

100 Cambridge Street, Boston, MA, 1:00 p.m.

Members in Attendance:

Vandana Rao, Chair	Designee, Executive Office of Energy and Environmental Affairs (EEA)
Linda Balzotti	Designee, Department of Housing and Community Development (DHCD)
Anne Carroll	Designee, Department of Conservation and Recreation (DCR)
Douglas Fine	Designee, Department of Environmental Protection (MassDEP)
Hotze Wijnja	Designee, Department of Agricultural Resources (DAR)
Michelle Craddock	Designee, Department of Fish and Game (DFG)
Thomas Cambareri	Public Member
Vincent Ragucci	Public Member
Kenneth Weismantel	Public Member

Members Absent

Todd Callaghan	Designee, Massachusetts Office of Coastal Zone Management (CZM)
Marcela Molina	Public Member

Others in Attendance:

John Gregoire	Massachusetts Water Resources Authority
Lexi Dewey	Water Supply Citizens Advisory Committee
Jen Pederson	Massachusetts Water Works Association
Caitline Barber	Tufts University
Michele Drury	DCR
Andreae Downs	Wastewater Advisory Committee
Kate Bentsen	DFG/Div. of Ecological Restoration
Katie Ronan	Massachusetts Water Resources Authority
Gardner Bent	U.S. Geological Survey
Gabby Queenan	Massachusetts Rivers Alliance
Eva Murray	EEA
Duane LeVangie	MassDEP
Margaret Van Deusen	Charles River Watershed Association
Lynn Gilleland	U.S. EPA, Region I, Drinking Water
Stephen Boksanski	Green Industry Alliance
Viki Zoltay	DCR
Thomas Maguire	MassDEP Wetlands Program
Marilyn McCrory	DCR
Sara Cohen	DCR

Rao called the meeting to order at 1:09 p.m.

Agenda Item #1: Executive Director's Report

Rao announced that the draft update to the Drought Management Plan has been published. She acknowledged the work of many staff and contributors.

Fine summarized that MassDEP had issued a health advisory for five per- and polyfluoroalkyl substances (PFAS) in spring 2018. MassDEP expects drinking water suppliers to meet this guideline and has the authority to require action when the guideline is exceeded.

Fine noted that these substances are not regulated for drinking water at the federal level. He also noted that the Conservation Law Foundation and Toxics Action Center had petitioned MassDEP to establish a treatment technology standard for drinking water for the entire class of PFAS (more than 3,000 currently unregulated compounds). A public meeting on the petition was held in January 2019. MassDEP responded to the petition stating that the agency will move forward with a regulatory process to propose a waste site cleanup standard for groundwater and a regulatory process to propose a drinking water standard (maximum contaminant level). MassDEP's proposed regulatory standards will focus on the PFAS substances about which there is adequate information on toxicology and health risks, the ability to reliably detect these substances, and the efficacy of treatment technologies. Draft regulations for the proposed waste site cleanup standard will likely be available for public comment in the coming months. MassDEP will invite robust public discussion on what substances should be included and at what values. MassDEP will also present more detail on this issue at a future meeting of the Water Resources Commission. [*Editor's note*: Information on PFAS and on the petition can be found on the Mass.Gov website at https://www.mass.gov/lists/pfas-information-a-petition-for-rulemaking-to-establish-a-treatment-technique-drinking-water.]

In response to questions, Fine explained that these compounds are present in many consumer products – such as nonstick coatings, furniture fabrics, and dental floss – and in fire-fighting foam used at commercial and military airfields. Firefighting foams have been the primary source of the contamination in Massachusetts. These compounds are also used at some manufacturing facilities and, in other states, have contaminated water as a result of deposition from air emissions from these facilities.

Weismantel asked about the status of legislation to address lead in drinking water service lines. Fine responded that a number of bills have been proposed to address lead in drinking water, including requirements for disclosure and for action thresholds and response requirements by schools. He added that the bulk of lead at the tap comes from lead leaching out of older fixtures within buildings. Pederson explained that Representative Carolyn Dykema has filed legislation, on behalf of the Massachusetts Water Works Association, that amends existing lead law on paint and plaster. The bill would require disclosure, upon property transfer, of the presence of lead in plumbing, piping, and service lines. She added that U.S. EPA Region 1 is hosting a lead summit on March 7, 2019, at which all New England states can share best practices.

Agenda Item #2: Hydrologic Conditions and Drought Update

Zoltay provided an update on the hydrologic conditions for January 2019. Zoltay reported that wet conditions continued in January, with precipitation above the average for the month in all regions. However, there is a significant snowpack deficit for this time of year; this may result in impacts later in the spring. Streamflow was above normal for the sixth month in a row. Groundwater levels varied but were generally normal. Most reservoir levels were significantly above normal, with some spilling. The NOAA seasonal drought outlook does not project any drought conditions through April.

Fine requested clarification on the impacts of a snowpack deficit and the trend toward warmer winters, particularly potential long-term implications for drought. Zoltay explained that a slowly melting snowpack in spring can bolster streamflow between precipitation events. She noted that despite generally wet conditions, groundwater wells are showing only normal levels. Rao added that USGS is completing work on a comprehensive characterization of wells in Massachusetts, and this work will provide insight on response times.

Rao announced that the scheduled presentation by USGS on water use in the United States will be postponed to a future meeting.

Agenda Item #3: Discussion and Public Comment: Draft Drought Management Plan

Rao provided background on the Drought Management Plan, noting that a plan was first published as a working document in 2001, in response to a drought in the late 1990s. The plan was tested during several subsequent droughts, and minor changes were made in 2013. The current draft is the result of a collaborative effort over several years. It includes major changes and updates to every aspect of the plan, from methodology to operations to actions and legal authorities. She noted an emphasis on actions needed at the state and local levels to prepare for drought in order to minimize the impacts. Rao reviewed each section of the updated plan, highlighting significant changes.

In Section Two, Authority and Coordination, she noted the addition of a Drought Management Mission Group, which will assist the Drought Management Task Force in prioritizing and tracking response actions. Van Deusen suggested convening the Mission Group at Drought Level 1 instead of Level 2. Rao explained that state agencies will continue their tracking and analysis work during Level 1, but Level 2 is the point at which coordination through the Mission Group needs to happen. Both Van Deusen and Queenan commented that the Drought Management Task Force would benefit by having a representative of an environmental organization on the task force to provide on-the-ground perspective. Queenan asked how deliberations of the Mission Group will be shared, and Rao responded that the group's actions would be reported at meetings of the Drought Management Task Force.

Rao highlighted changes to Section Three, Drought Assessment and Determination. Regarding drought regions, she explained that small adjustments were made to the boundaries of the drought regions in the eastern part of the state to better align with county boundaries. In addition, the Cape Cod and Islands region are split into two separate regions, given different impacts seen during the 2016-2017 drought.

In response to a question from Van Deusen about using watershed boundaries, Carroll explained that the plan continues to provide flexibility for the Drought Management Task Force to make a drought determination based on a smaller scale, such as a watershed. Zoltay added that the ability to automate data analysis is needed before indices can be calculated with spatial delineations other than the drought regions. Pederson commented on the challenge of communicating drought levels based on subwatersheds.

Regarding drought levels, Rao explained that the updated plan maintains four drought levels, but names for these have been changed to more readily understandable nomenclature that more

closely aligns with drought conditions; for example, the "Drought Advisory" level is renamed "Mild Drought."

Carroll reviewed maps of the monitoring networks for each of the drought indices. She explained that the plan keeps six of the seven indices, adding that a duplicate precipitation index was removed. She noted that the reservoirs index was renamed "lakes and impoundments" to show that this index represents surface water storage and not water supply availability. Gregoire suggested that more information be provided in an appendix on the impoundments and wells used for drought monitoring. This information could be provided in a table format and include, for impoundments, surface area, average and maximum depth, storage volume, and average daily demand and, for wells, period of record and depth.

Carroll explained changes to the methods for calculating the indices. The goals for these changes are to provide warning, as early as possible, of oncoming drought; more accurately reflect drought severity; and provide a longer look-back period for precipitation to capture the cumulative effect of dry periods over multiple years. She noted that the new method for calculating indices uses a percentile approach for four of the six indices, explaining that this method provides a better indication of the severity of conditions, is better aligned with the approach used by the U.S. Drought Monitor and the U.S. Geological Survey, and allows for more consistency in the way most of the indices are calculated. She highlighted differences from the U.S. Drought Monitor methodology, noting that the Massachusetts drought plan combines two of the Drought Monitor's drought levels and also includes data not used in the Drought Monitor, particularly data on reservoirs and groundwater monitoring wells in Massachusetts.

Carroll explained that the revised method for calculating indices was tested on numerous droughts. Indices calculated using the new method were presented to the technical workgroup, which conducted a mock Drought Management Task Force meeting to compare how historical data from both drought and non-drought periods would be interpreted using the new method. The result of this trial was that drought determinations aligned better with both U.S. Drought Monitor levels and on-the-ground conditions, drought onset was determined about one month earlier, and the new method captured severity sooner.

Weismantel asked how the new method will handle determinations of the end of a drought. Carroll and Rao explained that the percentile approach is more responsive to on-the-ground conditions and will be a better indicator of return-to-normal conditions. Van Deusen asked if the new method would have caught the 2016 drought significantly sooner. Zoltay explained that the mock Drought Task Force meeting did not use data from the 2016 drought; however, the new method would have provided earlier warning of the 2016 drought based on the indices values from that period.

Rao added that Appendix D, which will be distributed during the comment period, memorializes the thinking that went into the new methodology.

Carroll then highlighted changes to the remaining sections:

- Section 4, Process of Determining Drought Status: updated descriptions of how drought determinations are made and of all factors considered and how they may be weighted

- Section 5, Drought Communication: new and expanded descriptions of communication tools, platforms, procedures, and responsibilities
- Section 6, Summary of Responsibilities by State Agency: updates narratives on the various responsibilities of each state agency
- Section 7, Drought Preparedness and Response Actions of State Agencies: adds more detail on actions at each level of drought; adds a new section of actions state agencies take to prepare for drought; and outlines statewide guidance on outdoor watering during a drought
- Section 8, Drought Preparedness and Response actions – Guidance for Communities: this is a new section identifying key actions communities can take to prepare for and respond to drought. Carroll noted that the guidance in this section draws heavily from the Massachusetts Water Conservation Standards. She added that staff is also working with water suppliers on a new Appendix, still in progress, that will provide more detailed guidance on developing local drought thresholds for water systems.
- Section 9, Post-Drought Actions, including assessing drought response
- Section 10, Drought and Emergency Declarations, Legal Authorities: clarifies legal authorities and powers for both local and state entities.

Discussion ensued on a web-based portal for reporting drought-related data and conditions. Rao noted that EEA has applied for a NOAA grant to develop an enhanced website that would gather and report data. Zoltay added that agencies are hoping to customize the national Drought Impact Reporter for Massachusetts as a data gathering tool.

- Van Deusen commented that such a portal would likely elicit responses from citizens, but asked what agencies would do with the data.
- Fine responded that robust data collection requires both a reporting mechanism and requirements for reporting. For data on perennial streams that are running dry, MassDEP relies of reports from conservation commissions, but does not have monitors on every stream. He added that MassDEP requires all public water suppliers to report when they implement water-use restrictions.
- Weismantel suggested seeking data from local Boards of Health. Carroll added that future efforts would involve Boards of Health in earlier stages of drought in coordinating with private well owners on impacts.
- Pederson noted that water-use restrictions are based on permit conditions and do not necessarily reflect on-the-ground conditions. She added that this creates challenges for communities in communicating with the public on how a drought-related watering ban is different from routine, calendar-based restrictions.
- Queenan pointed to the New Hampshire portal as a model. She added that environmental groups can aid in gathering on-the-ground data, noting that this would be an important contribution to deliberations of the Drought Management Task Force, if a seat were designated for an environmental group.

Discussion also focused on drought guidance for communities. Queenan asked how the local drought management plans will correspond with the state plan and if these are to be shared publicly. Carroll and Rao explained that the drought planning guidance for communities will focus on water supply systems and recommended actions. Pederson commented that these plans should be thought of as water system resiliency plans and the metrics needed to determine if supply is adequate. Van Deusen commented that naming these plans “Drought Management

Plans" is misleading if their focus is only on water supply. She added that drinking water impacts should not be divorced from environmental impacts and that these local plans should consider water resources broadly. Carroll responded that it is envisioned that these plans will include graduated response actions in response to drought. Rao added that this Appendix will be distributed for public comment.

Other comments, questions, and responses:

- Pederson noted that, as a member of the Drought Management Task Force, the Massachusetts Water Works Association would have been interested in participating in the mock task force meeting to test the new method. She requested copies of the graphs used during the trial of the new method.
- Pederson commented that it is not clear that the guidance on outdoor watering (Table 10) applies to state entities. She suggested that a statement about state entity compliance with outdoor watering guidance be moved from Table 11c to an earlier stage of drought.
- Dewey asked which state agency will take the lead in communicating with regional planning agencies, noting that RPAs have well-established lines of communication with municipal authorities. She also asked about funding sources. Rao responded that EEA and MassDEP communicate with regional and local entities and provide grant funding, such as through the Municipal Vulnerability Preparedness program and Water Management Act program. Rao added that EEA plans to disseminate the final Drought Management Plan and will make sure the plan is on the radar of the RPAs.
- Queenan noted that media outlets relied more on the national Drought Monitor than on the state's declarations of drought levels, asking what could be done to clear up confusion about where the public gets its information.
- Cambareri pointed out that the 1991 drought, which was more severe on Cape Cod than the 2015 – 2016 drought, is missing from the state history of droughts.
- Regarding drought region boundaries, Pederson questioned why the town of Brookline was moved from the Southeast to the Northeast drought region. Bent explained that Brookline (in Norfolk County) is separated geographically from the Southeast drought region (which includes Norfolk County) and sits more naturally within the Northeast region.
- Weismantel suggested that the Executive Summary provide clear direction to specific parts of the Drought Management Plan for different audiences. He also commented that the Drought Management Plan be reviewed after every drought, rather than on an arbitrary review schedule.
- Boksanski noted some inconsistencies between language in the model water use restriction bylaw/ordinance and the definition of system interruption devices in the general laws and language in the Water Conservation Standards. He offered to work with state agencies on making the language consistent.

Rao noted that public comments on the draft Drought Management Plan should be submitted by February 25, 2019, and any comments made at today's meeting will also be considered.

Meeting adjourned, 2:55 p.m.

Documents or Exhibits Used at Meeting:

1. USGS Report: Estimated Use of Water in the United States. Available at https://pubs.er.usgs.gov/publication/cir1441
2. Drought Management Plan Documents
    - 2018 Massachusetts Drought Management Plan: Preparedness and Response Plan, Draft, January 2019
    - Summary of Changes
3. MEPA Comment Letter: Burlington Environmental Notification Form
4. Interbasin Transfer Follow-up Correspondence:
    - AvalonBay Sharon
    - Elm Bank Wellfield
    - Dedham-Westwood Fowl Meadow Well
    - Canton Well #9
5. Interbasin Transfer Act project status report: 30 January 2019
6. Hydrologic Conditions in Massachusetts, January 2018 (available at https://www.mass.gov/water-data-tracking)
7. Presentation by Vandana Rao and Anne Carroll: 2019 Massachusetts Drought Management Plan – Draft: What's New, What's Changed? (https://www.mass.gov/files/documents/2019/02/19/2-14-19-drought-mgmt-plan.pdf)

Compiled by: mjm

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